

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:

Davies Collison Cave  
Level 15  
1 Nicholson Street  
MELBOURNE VIC 3000

**PCT**

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing  
(day/month/year) 6 JAN 2004

Applicant's or agent's file reference  
12364890/EJH/wm

FOR FURTHER ACTION See paragraphs 1 and 4 below

International application No.

PCT/AU03/01544

International filing date

18 November 2003

Applicant

MURDOCH CHILDRENS RESEARCH INSTITUTE et al

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

**When?** The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

**Where?** Directly to the International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland  
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

Shortly after 18 months from the priority date, the international application will be published by the International Bureau.

If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later);

otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/AU

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PHILIPPA WYRDEMAN

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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>12364890/EJH/wm</b>	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">FOR FURTHER ACTION</div> <div>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</div> </div>	
International application No. <b>PCT/AU03/01544</b>	International filing date ( <i>day/month/year</i> ) <b>18 November 2003</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>18 November 2002</b>
Applicant <b>MURDOCH CHILDRENS RESEARCH INSTITUTE et al</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the title, ☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**Genotyping of deafness by oligonucleotide microarray analysis** *u*

5. With regard to the abstract, ☒ the text is approved as submitted by the applicant

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure

☐ because this figure better characterizes the invention

☒ None of the figures

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU03/01544

## CLASSIFICATION OF SUBJECT MATTER

Cl. 7: C12Q 001/68

According to International Patent Classification (IPC) or to both national classification and IPC

## FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

SEE ELECTRONIC DATABASE BOX BELOW

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SEE ELECTRONIC DATABASE BOX BELOW

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MEDLINE; MEDLINE; DEAF?; HEARING; LOSS; IMPAIR?; DNA CHIP; GENE CHIP; MICROARRAY;  
ARRAY; OLIGONUCLEOTIDE ARRAY

## DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	DeRisi J (2000). Unit 22.1: Overview of nucleic acid arrays. In: Current Protocols in Molecular Biology. Supplement 49, pp 22.1.1-22.1.3. John Wiley & Sons, Inc.	
X	See the entire document.	1-14, 16
Y		1-25
	Hone S and Smith R (2002). Medical evaluation of pediatric hearing loss. Laboratory, radiographic, and genetic testing. Otolaryngologic Clinics of North America 35(4): 751-764.	
X		1-25
Y	See the entire document.	1-25

☒ Further documents are listed in the continuation of Box C☒ See patent family annex

Special categories of cited documents:	
"C" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"D" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  
1 December 2003Date of mailing of the international search report  
6 JAN 2004

Name and mailing address of the ISA/AU

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## (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	WO200250305 A1 (MURDOCH CHILDRENS RESEARCH INSTITUTE) 20 December 2000.	
X	See the entire document.	1-25
Y		1-25
	Dong J et al (2001). Nonradioactive detection of the common Connexin 26 167delT and 35delG mutations and frequencies among Ashkenazi Jews. Molecular Genetics and Metabolism 73(2): 160-163 (abstract).	
X	See the abstract.	1-25
Y		1-25
	Bacino C et al (1995). Susceptibility mutations in the mitochondrial small ribosomal RNA gene in aminoglycoside induced deafness. Pharmacogenetics 5(3): 165-172 (abstract).	
X	See the abstract.	1-25
Y		1-25
	Kenna M et al (2001). Connexin 26 studies in patients with sensorineural hearing loss. Archives of Otolaryngology — Head & Neck Surgery 127(9): 1037-1042 (abstract).	
X	See the abstract.	1-25
Y		1-25
	Wiszniewski W et al (2001). High frequency of GJB2 gene mutations in Polish patients with prelingual nonsyndromic deafness. Genetic Testing 5(2): 147-148 (abstract).	
X	See the abstract.	1-25
Y		1-25
	Pampanos A et al (2002). Prevalence of GJB2 mutations in prelingual deafness in the Greek population. International journal of Pediatric Otorhinolaryngology 65(2): 101-108 (abstract).	
X	See the abstract.	1-25
Y		1-25
	Scott D et al (2000). Functional differences of the PDS gene product are associated with phenotypic variation in patients with Pendred syndrome and non-syndromic hearing loss (DFNB4). Human Molecular Genetics 9(11): 1709-1715 (abstract).	
X	See the abstract.	1-25
Y		1-25

(Continuation)

## DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Dreyer B et al (2001). A common ancestral origin of the frequent and widespread 2299dcIG USH2A mutation. American Journal of Human Genetics 69(1): 228-234 (abstract).	
X	See the abstract.	1-25
Y		1-25
	Chen Z-Y and Corey D (2002). Understanding inner ear development with gene expression profiling. Journal of Neurobiology 53: 276-285.	
X	See the entire document.	1-25
Y		1-25
	Database Accession # AC026202. Chen C et al (18 October 2002). Homo sapiens chromosome 3 clone RP11-572B2 map 3p, complete sequence.	
A	See the entire document, in particular nucleotides 150000 to 149984 (reverse complement) which are complementary to SEQ ID NO 55.	
	Note: for the Y indications, any one of DeRisi (2000), Hone and Smith (2002), WO200250305 or Chen and Corey (2002) may be combined with any one of Dong et al (2001), Bacino et al (1995), Kenna et al (2001), Wisziewski et al (2001), Pampanos et al (2002), Scott et al (2000) or Dreyer et al (2001), with relevance to claims 1-25.	

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application no.

PCT/AU03/01544

is Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in  
Search Report

Patent Family Member

VO	200250305	AU	20020701	CA	20020627	EP	20031022
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